

aged twenty-one years, who for nine years had had attacks of palpitation of the heart and dyspnea at the time of menstruation. In 1895, after a fright, she had convulsions and became unconscious, and similar attacks occurred every month, preceded by paræsthesia of the hands and feet. Excitement and anger frequently brought on the attacks. Three weeks before admission to the hospital the patient's skin became dark, she grew weak, had constant headache, and complained especially of palpitation of the heart. The eyes became prominent. The appetite was increased, but there was steady and marked loss of weight. In addition to the symptoms mentioned, the patient complained of weakness, with giving way of the legs, and excessive night-sweats. On admission there was general pigmentation of the skin, most marked on the extensor surfaces, the axillæ and groins, areolæ, and external genitals. The perspiration was excessive. Exophthalmos was marked, with Graafé's, Stellwag's, and Möbius' symptoms. There was great restlessness, almost amounting to choreic movements, and a fine tremor of the hands. The patient was very excitable. The thyroid was slightly enlarged. The heart was enlarged, the sounds pure; pulse 100. The urine and blood were negative. While under observation the patient gained in weight, the pigmentation became paler, menstruation reappeared. A number of hysterical attacks occurred, following trifling annoyances. The temperature grew irregular, the stools became diarrhœal, and after a sudden and unexplained rise of temperature, with frequent pulse and respiration, the patient died. Autopsy showed adenoma of the thyroid, hyperplasia of the thymus, tonsils, spleen, and of the adenoid tissue in the stomach and intestines, and hypertrophy and dilatation of the heart. As infection could be excluded (?), the author looks on the changes in the lymphatic tissue as due to an intoxication, the same that caused the fever and the sudden death.

During life the metabolic processes were carefully studied, the period of observation—forty-six days—being the longest so far reported in this disease. The results are given in detail. The medication, including thymus and thyroid tablets, had no effect on the disease or the metabolism, but was used for so short a time that no definite conclusions can be drawn, especially in regard to the harmlessness of the thyroid extract. The emaciation was overcome by overfeeding, but aside from a few symptoms this had no effect on the disease as a whole.

Pneumonia with Peculiar Course.—*PSYCHIAU* (*St. Petersburger med. Wochenschrift*, 1898, No. 52) reports the following case. Fourteen days after a severe attack of angina, the patient, a child, developed a temperature of 39.5° C., pulse of 160; the breathing was weak and rapid; there were vomiting and marked apathy. On examination of the chest distinct bronchial breathing was detected in the right lower lobe. During the night there was profuse sweating, followed by profound sleep and a fall of temperature to 36.6° in the morning. The breathing was quiet, the pulse regular, 84; there was neither cough nor bronchial breathing, but at midnight the temperature rose to 41.1°; the pulse was 130 to 140 and the breathing 50 per minute. Over the section of the lung first affected the murmur was purely vesicular, while in the right upper lobe there was indistinct bronchial breathing, with a somewhat tympanic note on percussion. On the following morning the

temperature was 36.6°; there was complete euphoria, with no signs in the lungs. In the evening the temperature again went up, reaching 41°. From this time there was distinct infiltration of the left lower lobe, with characteristic signs. Ten days after the infiltration of the left lower lobe was first demonstrated the temperature was for the first time under 37° C. It rose the next day, however. On the nineteenth day of the disease and the seventh day of the second period of fever crisis occurred, the temperature falling to 36° C. The author believes that this case was a mixed infection, a part of the symptoms being caused by Fraenkel's diplococcus and others by the streptococcus. He is in doubt as to whether this was a case of croupous pneumonia, with delayed and somewhat unusual course and very tardy crisis, or a recurring pneumonia in which the first crisis occurred at the beginning of the twelfth day of the disease, and after only twenty-four hours' intermission the recurrence began. He also considers the possibility of a wandering pneumonia. The author thinks the pneumonia was secondary to the angina, the infective agents being streptococci and diplococci harbored in the tonsils. The child had not been out of the house for weeks, and there had been no pneumonia in the house for a year at least.

SURGERY.

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The Technique of Craniotomy; A New Conductor for the Wire Saw.—
PODREZ (*Centralblatt für Chirurgie*, 1899, No. 9), realizing the advantages of craniotomy when performed by the osteocutaneous flap method, with the use of the wire saw, has devised an instrument for passing it rapidly from one opening in the skull to another, and afterward protecting the brain and its membranes from injury while the bone is being divided.

The instrument is made from a watch-spring, 3 to 4 millimetres broad and 13 to 15 millimetres long. At one end is a ring or handle, at the other a rounded tip perforated with an eye, to receive the silk ligature that is connected to the saw, and is double the length of the conductor. The ligature is attached to the saw, then threaded to the middle in the eye of the conductor. Two openings are made at the ends of the line of incision, in a slanting direction, in which the saw is to be passed. The director is then passed, armed with its thread, and is made to emerge at the second opening. The thread is removed from the eye and the saw drawn through. The guide, on account of the

recoil of the spring, presses the membranes of the brain and the brain itself inward, and prevents injury by the saw. Three sides of the square to be removed are cut in this manner. In the fourth only the inner table is cut, while the outer is broken, preserving the periosteum and skin pedicle.

On Nephralgia.—HUBBARD (*Annals of Surgery*, August, 1899) reports five cases in which no assignable cause could be found for the pain and with symptoms that were so severe as to simulate calculous disease. While holding that nephralgia is a term expressive of a symptom rather than a disease, he believes that there are a certain number of cases which must be classed under this term where pain is the most marked symptom.

All of the cases reported were operated upon, and in all but one a nephrotomy was done and the kidney searched for stone, without any being found. Four cases recovered from the pain and other symptoms, as hæmaturia and pyuria. The one that was not relieved had had the kidney incised, but no stone was found.

The symptoms are so often those of stone in the kidney that the differential diagnosis is difficult and rarely made. Age and sex are no help. Stone is found in the right or left kidney in relatively the same proportion of cases. Involvement of the testicle by the pain is a little more frequent in nephralgia. The urine gives the greatest help; it is free from blood, pus, and crystals in a great majority of cases, though it may be free in calculous disease. The urine may also be normal in those cases where the flow is stopped, at least temporarily, from the diseased kidney by the impaction of a stone in the ureter. However, in most cases where the symptoms are sufficiently persistent and severe to warrant the diagnosis of stone the urine will be found to be abnormal. With regard to distinguishing the urine of pyelitis from that of cystitis, it is said that the reaction in the former is usually acid while in the latter alkaline. Cystoscopy may be of aid in determining which kidney is diseased. The diagnosis from tuberculous kidney may at times be difficult.

Operation is usually started with the idea that a stone is present. To be thorough, the examination for calculus must be made with a probe as well as by the finger. If nephrotomy is not effectual, palpation and needling are of uncertain value. The ureter should be probed for calculi. If nothing abnormal can be found the capsule should be split from pole to pole and the kidney fixed in place by sutures before closing the wound. The prognosis, though not always favorable as to cure, is certainly, in the light of present experience, much better than formerly, and if any mobility has been detected and rectified relief may be hoped for.

The Treatment of Injuries of the Spinal Cord.—BOLTON (*Annals of Surgery*, August, 1899) makes the following summary of his method of treatment:

Extradural hemorrhage does not give rise to cord lesions or symptoms, and requires no treatment.

2. Total lesions of the cord are irremediable, because the cells and fibres of the entire cord are destroyed, are never regenerated, and are replaced by cicatricial tissue. The lesion thus is permanent, and requires no treatment.

3. In hæmatomyelia the clot is absorbed; its site persists as a cavity or is filled by newly-formed tissue; irregularities of circulation in the surrounding portions of the cord adjust themselves. There may be great amelioration of the symptoms. There is, therefore, no therapeutic indication, and no remedial treatment is possible.

4. In partial contusion of the cord the lesion results in permanent destruction of cells and fibres; disturbances of circulation adjust themselves. Repair is accomplished by cicatricial tissue. No treatment is available.

5. In open injuries of the cord there are destruction of cells and fibres and disturbances of circulation. In addition, infection may occur or a foreign body be introduced and left in or lodged against the cord, and by its continued presence produces great disturbance of circulation and consequent extensive degeneration and necrosis of cells and fibres. Repair occurs by cicatricial tissue. Here immediate operation is indicated for antiseptis, drainage, and the removal of the foreign body.

Observations on the Sterilization of Catgut—DARLING (*Journal of the Boston Society of Medical Sciences*, May, 1899) has shown by a series of experiments that it is possible and practicable to sterilize catgut by dry heat and yet maintain the tensile strength of the gut. When baked in the ordinary way it becomes shrivelled and brittle if the temperature is high enough to sterilize it. This may be effectually prevented by wrapping the separate strands in several layers of paraffin paper. This simple procedure prevents the driving out of the moisture and fat in the catgut, so that it remains unshrivelled and flexible after a prolonged exposure to dry heat. This use of paraffin paper is not new; it was first employed by Broeckmann. The sterilization should be for three hours at a temperature of 140° C. None of the twenty lots of gut thus treated was found to contain bacteria. His observations lead him to the following conclusions:

1. Catgut can be sterilized by dry heat with but slight loss of tensile strength.

2. Dry paraform gas is of doubtful value for the sterilization of catgut.

3. Methods of sterilization which involve soaking in antiseptic solutions tend to weaken the catgut to a greater or less degree.

Suturing and Wounds of the Heart.—WEHR (*Centralblatt für Chirurgie*, July 8, 1899) was led by the recent advances made in the surgery of heart wounds to study experimentally on animals the technique of such operations. His studies lead him to the following conclusions:

1. The heart must be reached through a large wound if the operation is to be successful on a wounded and bleeding heart. He found it very difficult to operate unless there was given sufficient room; the sutures could not be placed with ease otherwise or with the rapidity that the urgency of the case demands.

2. Some method is essential by which the heart can be freely exposed and the wound enlarged in any needed direction.

3. Compression of the heart to make the operation bloodless is dangerous. He found that in the dog it produced death, and believes it should be strenuously avoided in the human being.

The author proposes the following method for operations on the heart:

An incision commences on the right border of the sternum, just above the fourth rib, and passes transversely across to above the cartilage of the fourth rib on the left side. The incision is then curved across the fourth, fifth, and sixth costal cartilages, and sweeps inward transversely through the seventh, resecting the xiphoid at its base. The costal cartilages are to be resected in an inclined direction, so that the plane of the incision intersects the cartilage nearer to the sternum internally than it does externally. After the cartilages have been resected and the sternum has been sawed through without injury to the mediastinal periosteum the whole skin muscle and bone flap are turned back gradually, while the costal pleura is carefully dissected free from it. When this is accomplished the flap is turned clear back, breaking the costal cartilages on the right side. In resecting the ribs a button-pointed bistoury should be used, to avoid injury to the internal mammary artery.

Excision of Carcinoma of the Sigmoid Flexure.—BARLING (*Birmingham Medical Review*, March, 1899) reports two cases of carcinoma of the sigmoid which came to him sufficiently early in the course of the disease to justify an attempt at excision. Three other cases suffered from the disease in the same location, but local and general conditions absolutely forbade any attempt at excision.

In neither case was any attempt made at the time to restore the continuity of the bowel. It was undesirable in the first case, owing to the adhesion of the growth to the parietes and the rather extensive manipulation called for in the excision. He, therefore, employed Paul's method. In the second case the patient was in the middle of an acute attack of obstruction and six months pregnant. The complete operation, with restoration of the bowel, is the more brilliant operation; but the author sought the rapid recovery of his patients, and in consequence did the shorter operation. The situation of the growths made the condition of the patient after operation the same as in left inguinal colotomy. The results were satisfactory in these two cases, the pregnant woman recovering and giving birth to a healthy child at term.

They were, however, disappointing, in that recurrence took place at the end of twelve months, though the conditions at the time of operation were apparently very good. The cases were not seen sufficiently early to render the chances favorable.

The Surgical Sequelæ of Influenza.—FRANKE (*Archiv f. klin. Chirurgie*, 1899, Band lix. Heft 1 and 3) finds that the involvement of bones is not an infrequent sequela of influenza. The manifestations are very similar to those seen after typhoid fever. They are chiefly osteoperiostitic in form, with fewer cases of osteomyelitis. This is the great difference from most forms of infectious bone disease, as the majority of them are forms of osteomyelitis. Suppuration takes place in a very small proportion of cases. In his own cases necrosis never took place, or at least not to the formation of sequestra. In some cases there was no suppuration, but the bone was softened. As an illustration, he mentions a case in which softening followed a traumatism in a patient who had had a severe attack of influenza.

The causation of all these bone diseases is possibly not proved, but it is certain that the influenza bacillus or the toxins it produces are responsible for some of them. This infection is less severe than that produced by the staphylococcus or streptococcus, and is more prolonged in its development. The bacillus can apparently remain dormant for a considerable period before manifesting its presence in these sequelæ.

Operation for Perforation in a Case of Typhoid Fever.—MARTIN (*University Medical Magazine*, June, 1899), in reporting a case in which he operated for perforation, but in which the patient died sixteen hours after operation, says of these cases that the operation will become more frequent, but that the mistakes in diagnosis and operations where perforation has not taken place will tend to give a set-back to the legitimate operation. There are certainly cases in which the differential diagnosis is extremely difficult. In intestinal paresis there is liable to be an absence of pain or fixed tenderness, and of the hardness of the abdomen which is a common accompaniment in peritoneal inflammation. Moreover, shock and a falling temperature are not characteristic of this condition. When, however, a patient in the second or third week of typhoid fever complains of a sharp, sudden, persistent, agonizing pain; of a great increase of tenderness; when this is accompanied by symptoms of marked constitutional depression, and is followed by rapid and life-threatening tympany, if there is the slightest prospect of his surviving operation the abdomen should be opened at once.

Deformity and Loss of Function Following Colles' Fracture that Involved the Radial Epiphysis, Retarding its Growth, while the Ulna Continued to Grow.—MARCHANT (*Rev. d'Orthopedie*, July, 1899) reports the case of a youth, aged eighteen years, who had fallen from a tree at the age of nine, fracturing both wrists. They had been set, and united well, with no loss of function. For some time previous to presenting himself the patient had noted an increasing functional loss, and finally observed a marked deformity of the left wrist, which brought him to the hospital. The examination showed a prominence of the ulna that was very marked. A skiagraph demonstrated the correctness of the opinion that there had been an interference with the development of the radius, due to the fracture which had involved the epiphysis, while the radius had continued to grow. A resection of the ulna corrected the deformity, and as a result perfect function was secured in the joints.

The Arterial System of the Kidney and its Relation to its Pathology and Surgery.—ZONDEK (*Archiv f. klin. Chirurgie*, 1899, Band lix. Heft 3) has made a careful study of the arteries of the kidney and their distribution by means of corrosive preparations, both in normal and anomalous cases. From these studies he derives the following conclusions that have a direct bearing on the surgery and pathology of the kidney:

1. The fact that one pole of the kidney frequently receives its arterial supply from a distinct branch of the renal artery would seem to account for tubercular infection of the kidney often being unipolar.

2. The origin of the capsular arteries is from the renal arteries within the parenchyma. This explains the frequent combination of paranephritis in the foci located in the substance of the kidney. The virus that should pass out through the kidney can enter the kidney and the capsule as well. Thus in paranephritis when the kidney is exposed disease is frequently found in its substance which was the original pus and yet had produced no clinical symptoms, or the reverse may be true.

3. The course of the capsular arteries dividing between the anterior and posterior surfaces and the superior and inferior poles of the kidney explain the division of paranephritic abscesses and processes into four groups, as pointed out by Tuffier.

4. The fact that occasionally we find a second anomalous main branch of the renal artery outside of the hilum, which is distributed directly to one or the other pole, accounts for the fact that occasionally during nephrectomies hemorrhage persists after the arterial pedicle has been ligated.

5. The relations of the different branches of the renal artery to the different portions of the kidney explain the mode of infection which produces localized metastatic abscesses.

6. The resection of the kidney is possible, as has been shown by various operators, and is indicated under certain conditions, as the function of the kidney can be maintained in the remaining portions. The distribution of the arteries indicates the lines of incision if the functional activity of the kidney is to be maintained at its best. The diseased foci should be removed in wedge-shaped sections, having the base on the periphery, with the lines of incision made in reference to the arterial distribution.

7. In nephrotomies the median incision should not be employed, but the arterial distribution should be taken into account. The section should be made in the middle third of the lateral aspect, parallel to but one-half to three-quarters of a centimetre from the middle line on the dorsal aspect of the kidney. It should penetrate somewhat obliquely into the pelvis. This incision avoids the larger arteries, and is less liable to provoke serious hemorrhage.

The Resection of the Vertebral Arches in Cases of Paresis due to Spondylitis.—TRENDLENBURG (*Archiv f. klin. Chirurgie*, 1899, Band lix. Heft 3) derives the following conclusions from his observations:

1. In pressure-palsies due to spondylitis the pressure upon the spinal cord is exerted either by an abscess or caseous focus in the spinal canal, by pachymeningitic granulations and fungous growths, or by the narrowing of the canal as the result of the angular deformity. The latter is far more frequent than has been formerly supposed.

2. The resection of the vertebral arches in selected cases has a more favorable prognosis than was known previously. It is especially indicated in cases that are nearly or completely cured of their tendency to angulation, while in acute cases the prognosis is bad, and operation may make the condition worse.

3. Complete paralysis does not preclude benefit. Even in cases that have existed seventeen years there may be and has been relief.

4. The result of the operation, as in other cases of nerve operation for pressure-palsies in the extremities or neuroplasties, can be delayed for a con-

siderable time. It is generally a year or six months before the paresis has completely disappeared.

The Operative Treatment of Epilepsy.—SCHAR (*Archiv f. klin. Chirurgie*, 1899, Band lix. Heft 3) comes to the following conclusions as the result of his study of the literature of this subject and his observation of the cases occurring in Koch's clinic:

Operation is to be undertaken in cases of epilepsy whenever internal dietetic treatment has failed to produce results in a short time. The slight mortality from such operations makes the danger inconsiderable. It is better to operate too often than too seldom. The surgeon who treats a case of traumatic epilepsy by internal medication for a long period, and only resorts to operation when he finds he cannot produce a cure by other means, does not do the best for the patient. Epileptic patients should be examined by the surgeon as well as the physician at an early period. It is best for them to make the examination together. In asylums the surgeon should from time to time examine the cases and determine which require immediate operation.

The surgeon should not forget, however, that internal medication and dietetic treatment are of great value, and that without them, even after operation, the patient could not recover. Alcohol must be avoided and special care given to the diet of children who have suffered from traumatism. Epilepsy due to traumatism can be greatly benefited by operation at the site of the trauma.

The Treatment of Compound and Complicated Fractures of the Leg.—CHANDOYE (*Rev. d'Orthopedie*, July, 1899) arrives at the following conclusions regarding the method of treatment employed by Poucet:

1. The treatment of fractures of the leg situated in its diaphysis and compound in character varies with the severity of the injury.

2. In the less grave cases, where there is a small wound but no bone protruding, after strict antiseptic precautions have been employed, the limb can be placed in proper position and ordinary fixation applied, together with an antiseptic dressing.

3. In the next group of cases, where the bone protrudes from a wound of greater or less extent, the result of a severe traumatism, recourse should be had immediately to resection, with careful antiseptics. This operation should be done immediately, before general infection has taken place. No more should be removed than is absolutely essential. The wound should not be enlarged or more dissection done than is absolutely necessary. It should, however, be sufficient to permit perfect antiseptics and the reduction of the fragments into position.

4. Should the case be seen later, after the infection has become more general, excision reduction, with rigorous antiseptics, is still the best procedure.

5. Amputation should be avoided in the great majority of cases, and only employed where the bloodvessels or nerves have been so injured that the vitality and functional value of the limb cannot be depended upon. Secondary amputation is to be employed only when a persistent infection and the weakened condition of the patient make it absolutely necessary.

6. The remote results of resection, so far as the functional ability of the limb is concerned, are excellent. The author has collected fifteen cases, which were seen at periods varying from five to twelve years after the accident. They all employed their limbs equally with the sound one, and walked long distances without any ill effects. In some cases even as much as twelve centimetres were resected without any apparent influence on function.

PEDIATRICS.

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Blennorrhagic Peritonitis in Female Children.—ROUSSEAU, in his recent thesis (*Péritonite Blennorrhagique chez la Petite Fille*, Thèse de Bordeaux, 1899), discusses this most serious though rare complication of specific vulvo-vaginitis in children. Clinically, it may appear as a generalized or localized acute peritonitis of grave or benign form, or may assume a chronic type.

In the acute forms the principal symptoms are abdominal pain, spontaneous or elicited by pressure, meteorism, vomiting. The temperature is elevated, the pulse small and frequent, the countenance pinched. In the benign form the symptoms are often obscure, being those of peritonism rather than true peritonitis. The chronic variety usually gives few symptoms, and is apt to be overlooked by both patient and caretakers.

In all cases of unexplained peritonitis in girls it is important to look for a vulvo-vaginitis. The discovery of the gonococcus in the peritoneal exudate, while inconstant, is a definitive diagnostic sign.

The prognosis is grave in some of the generalized cases, but recovery may occur with obliteration of the tubes and permanent sterility.

In the treatment prophylaxis is most important. No case of vulvo-vaginitis should be considered too trivial to demand careful treatment.

If the disease seems benign medical treatment may be sufficient (leeching, laudanum cataplasms, ice poultices, opium, restriction of diet, etc.). Should the pulse become frequent, operation should at once be made by a median incision. The earlier the intervention the greater will be the chance of success.

Cerebral Complications of Pertussis.—Reference is made to a case recently reported by E. SCHREIBER (*Archiv f. Kinderheilkunde*, 1899, Band xxvi. S. 1) for the purpose of calling attention anew to the very serious cerebral complications of whooping-cough. The patient was a girl, aged two years, who,

during a paroxysm of cough, presented generalized convulsions. These recurred on the following day, and two days later were repeated, after which it was found that the child presented a paralysis of all the members, with aphasia, paresis of the pupils, right facial palsy, and relaxation of the sphincters. The temperature rose to 103° and remained elevated for two days.

Meningitis was at first diagnosed, but the subsequent course of the case disproved this, the convulsions ceasing after twelve days, and speech and power beginning to return eight days later. The author attributes the disturbance to a meningeal hemorrhage, and concludes from a study of the literature that cerebral disturbances occurring in the course of pertussis are most often due to meningeal hemorrhage.

[In this connection attention may be called to a comprehensive study of the paralyzes of whooping-cough, published last year by LEROUX (*Journal de Clinique et de Thérapeutique Infantiles*, 1898, Nos. 13 and 17), an abstract of which was made in this department of THE AMERICAN JOURNAL OF THE MEDICAL SCIENCES, April, 1899.]

Varicella Aggravated by Dermal Irritation.—P. DESOIL (*Écho Médical du Nord*, 1899, No. 17, p. 193) calls attention to the fact that the eruption of varicella may become aggravated not only by confluence of its vesicles, but also by modification of the primary lesion, which can become spontaneously pustular. In these cases the vesicle, instead of drying and becoming a crust on the third day, becomes umbilicated and is transformed to a pustule which undergoes suppuration. The temperature again rises to 102°, 103°, or 104°, and remains elevated during the whole duration of suppuration; then, if there be no other complications, the suppuration subsides about the eighth day, the temperature falls, the pustules desiccate, and finally leave indelible, white cicatrices. In brief, the disease follows the course of variola.

The author has observed two cases of this kind. The first was that of a girl, aged three years, who, on account of a bronchitis, had had the chest painted with tincture of iodine two days before the eruption appeared. The area of the back irritated by the iodine became covered with a confluent eruption, while the rest of the body showed only discrete lesions. All the vesicles upon the irritated region, without exception, became pustular and healed slowly, leaving varioliform cicatrices, while only a few upon other portions of the body followed this course.

The second case, observed during an epidemic of varicella, was in a somewhat delicate boy, aged two-and-one-half years, who had had some evidences of lymphatism. He presented the usual prodromal symptoms of varicella. The parents, fearing convulsions, put the child for ten minutes in a strong mustard bath. This energetic revulsion of the skin produced an immediate effect upon the eruption, which, from being discrete in the evening, became very confluent on the following day. Five to six hundred vesicles and bullæ of all dimensions were counted. Most of these vesicles developed into pustules and suppurated. Only a small number dried and crusted without going further. During all the period of suppuration the temperature was high and the general state bad. Finally, after local accidents (dermic and glandular abscesses) and bronchopneumonic foci, the child recovered after an illness